

REMARKS

Claims 1-13 are pending in the present application.

Double Patenting Rejections

The following claims have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting:

Claims 1-6 and 10, in view of Claims 1 and 7-12 of copending application Serial No. 10/144,612;

Claims 10-13, in view of Claims 1, 2 and 7 of copending application Serial No. 10/613,725; and

Claims 4-9, in view of Claims 1-6 of US Patent 6,797,800 in view of copending application 10/144,612.

Applicants file herewith terminal disclaimers over each of the copending applications and issued patent to obviate the double patenting rejections. Applicants respectfully request withdrawal of this basis of rejection.

Rejections Under 35 U.S.C. §102

Claim 1-3 stand rejected under 35 U.S.C. §102(b) as anticipated by Goldstein, US Patent 5,315,004. Applicants respectfully traverse this rejection.

As recited in Claim 1, the present invention provides compounds containing uretdione groups, having a molar fraction of isocyanurate structures, based on the sum of uretdione groups and isocyanurate groups, of not more than 10%, obtainable by dimerizing aliphatic and/or cycloaliphatic isocyanates containing exclusively secondary and/or tertiary isocyanate groups.

In general, dimerizing NCO groups does not lead to idealized products solely containing uretdiones. Typically, the dimerized product initially formed tends to insert an additional NCO-group forming an isocyanurate ring. This insertion competes against the formation of further dimers. Thus, the catalyst is the key in controlling the trimerization reaction (insertion of a further NCO into a dimer) in favor of the formation of a second or further dimer.

Goldstein is asserted in the Office Action to disclose dimers of H12MDI containing no by-products like isocyanurates, thus allegedly meeting the claimed limitation of "molar fraction of isocyanurate structures, based on the sum of uretdione groups and isocyanurate groups, of not more than 10%". Applicants respectfully submit that Goldstein is not an enabling disclosure under §112 of the statute, and thus is not a proper prior art reference under §102(b), for the following reasons.

Goldstein does not disclose under which conditions and with which kind of catalyst the dimerization must be carried out to prepare pure H12MDI dimers. In the working examples of Goldstein isocyanates are dimerized without significant amounts of by-products but the isocyanates and the products do not fall within the scope of Claim 1 (HDI: primary bound NCO-groups; IPDI: primary and secondary bound NCO-groups; TDI: tertiary bound NCO groups but TDI is not an aliphatic or cycloaliphatic isocyanate). Claim 1 specifically states that "aliphatic and/or cycloaliphatic isocyanates containing exclusively secondary and/or tertiary isocyanate groups" are used in the dimerization.

Dimerization of isocyanates with exclusively secondary and/or tertiary bound NCO groups like H12MDI will not lead to products having no significant amounts of by-products, falling within the scope of claim 1, without the use of a special catalyst. In the present invention the catalyst used is the salt-like oligomerization catalyst having triazolate structures. The comparative examples presented in the specification demonstrate that dimerizing H12MDI with catalysts typically used for uretdione formation of aliphatic or cycloaliphatic isocyanates is not successful and does not lead to products containing dimers having less than 10% isocyanurates. The DMAP catalyst as exemplified in the comparative examples is comparable to the catalytically active pyridin moieties used in Goldstein; Goldstein uses heterogeneous catalysts, whereas the present invention uses homogeneous catalysts. Dimerizing H12MDI with a catalyst according to the examples of Goldstein will produce products with significant amounts of trimers.

According to the MPEP at 2121.01, "In determining that quantum of prior art disclosure which is necessary to declare an applicant's invention 'not novel' or

'anticipated' within section 102, the stated test is whether a reference contains an 'enabling disclosure'... ." *In re Hoeksema*, 399 F.2d 269, 158 USPQ 596 (CCPA 1968). The disclosure in an assertedly anticipating reference must provide an enabling disclosure of the desired subject matter; mere naming or description of the subject matter is insufficient, if it cannot be produced without undue experimentation. *Elan Pharm., Inc. v. Mayo Foundation for Medical and Education Research*, 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003). Applicants respectfully submit that under the guidelines presented in the MPEP and applicable law, Goldstein is not an enabling disclosure, as it does nothing more than name a compound that falls within the claims of the present invention. Goldstein does not disclose how to prepare the compounds of the present invention. Applicants respectfully submit that Claims 1-3 are not anticipated by Goldstein and request withdrawal of this basis of rejection.

Rejections under 35 U.S.C §103

Claims 10-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Goldstein in view of Laas, US Patent 5,621,064. Applicants respectfully traverse this rejection.

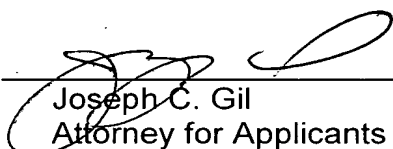
As discussed above, Goldstein is not an enabling disclosure, and therefore cannot anticipate nor render obvious the compounds of the present invention, as recited in Claim 1 and the claims depending therefrom, including Claims 10-13. Goldstein does not teach how to make the compounds of the present invention at the purity level claimed. Laas does not provide this missing teaching; Laas merely describes the use of uretdione compounds generally in the preparation of powder coatings. Applicants respectfully submit that Claims 10-13 are not obvious in view of Goldstein combined with Laas and request withdrawal of this basis of rejection.

CONCLUSION

Applicants respectfully submit that all outstanding issues have been addressed and Claims 1-13 are now in condition for allowance. A notice of allowance is requested at an early date.

Respectfully Submitted,

By



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